

# Presentation to Joint Legislative Commission on Energy Policy



North Carolina Propane Gas Association

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Dec 2<sup>nd</sup> 2014 2:00PM

# American Petroleum Institute 2012

## Top 5 in Propane Usage

- 1. California 489 million
- 2. **North Carolina – 405 million**
- 3. Michigan – 387 million
- 4. Illinois – 355 million
- 5. Texas – 325 million

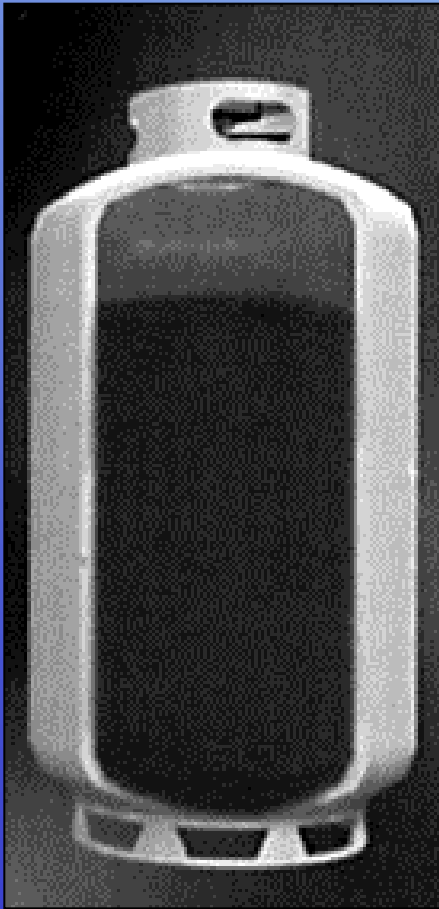
# Domestically Produced

- Lightest product that comes out of an Oil Well
- Heaviest Product out of a Natural Gas Well
- The US is now a Net Exporter of Propane
- Dixie Pipeline (Mt Belview TX to Apex NC)

# Composition of Propane

- Chemical composition- $\text{C}_3\text{H}_8$
- Colorless, odorless in natural state
- Ethyl Mercaptan added as odorant

# Inside Container



- Propane exists in both liquid and vapor states.
- Vapor portion (in top of container) is normally used to fuel burners.
- Liquid (in lower portion of container) is used when transferring product from one container to another and for motor fuel applications.

# Listed as an alternative Fuel

- Propane
- Natural Gas
- Bio-Diesel
- Electricity
- Ethanol
- Hydrogen

<http://www.afdc.energy.gov/fuels/propane.html>

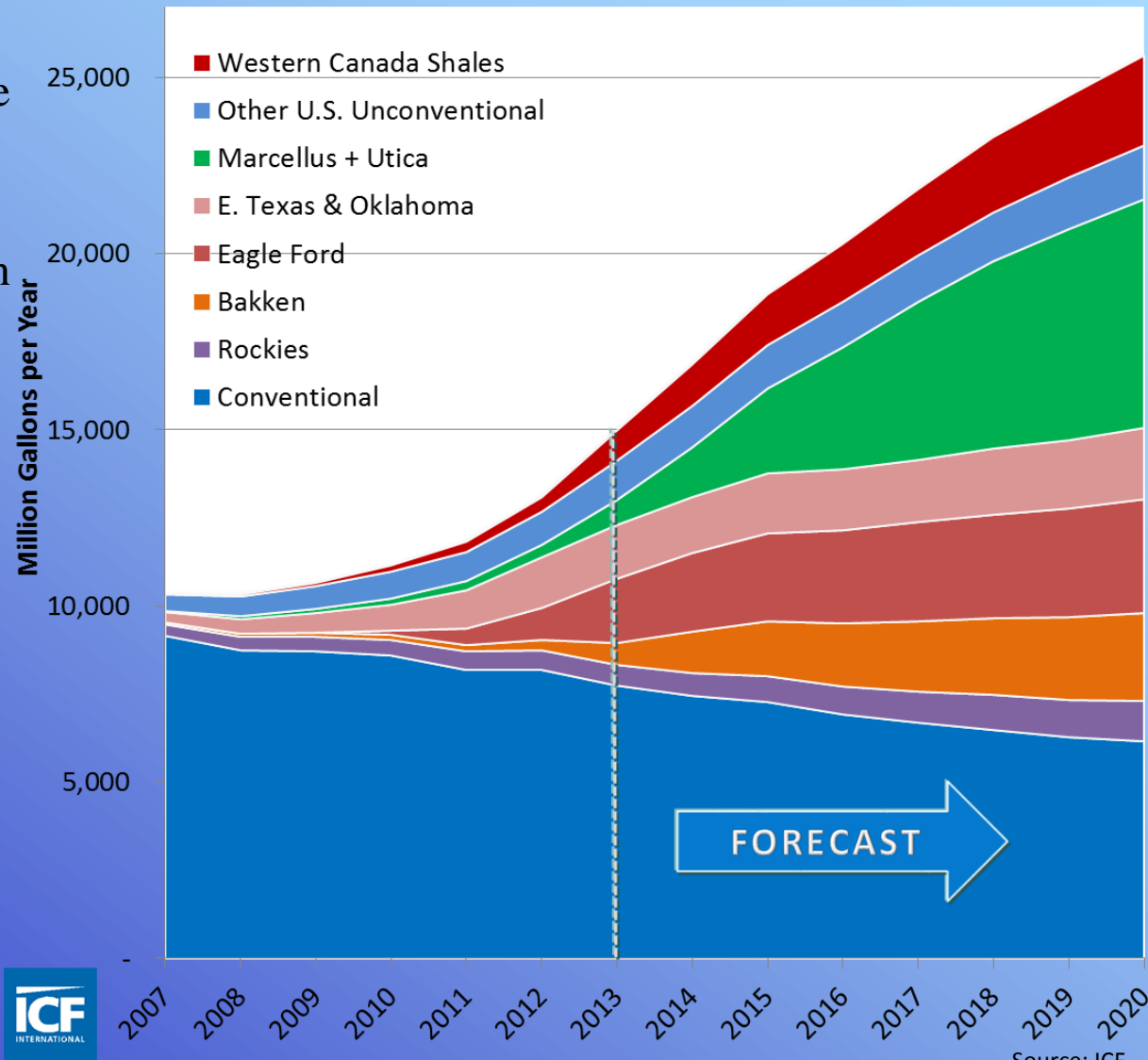
# Domestically Produced

- American Fuel
- Clean
- Affordable
- Abundant
- Portable



# Propane Production Growth

- ICF forecasts total North American production of propane from gas processing plants to grow from 14.8 billion gallons in 2013 to 25.6 billion gallons in 2020



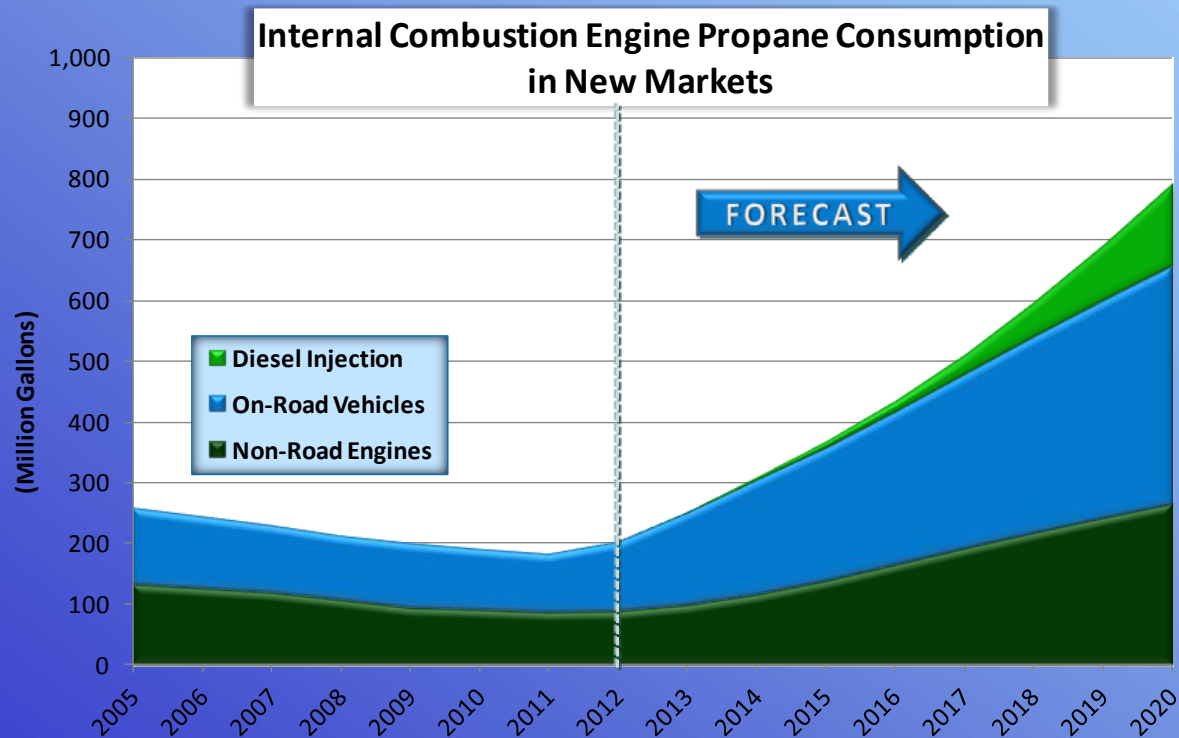


# New Propane Market Opportunities

Propane has an opportunity to develop major new markets wherever gasoline, diesel fuel, or fuel oil are widely used.

## Primary Growth Opportunities

- Heating oil conversions
- On-road vehicles
- Commercial mowers
- Irrigation engines



# Over 1000 Uses of Propane



# NC Agriculture Uses

- Crop Drying – Tobacco, Cotton
- Irrigation Engines
- Organic Farming
- Swine Heating facility
- Poultry Heating facility
- Weed Control
- Generators

# Mower Original Equipment Manufacturer

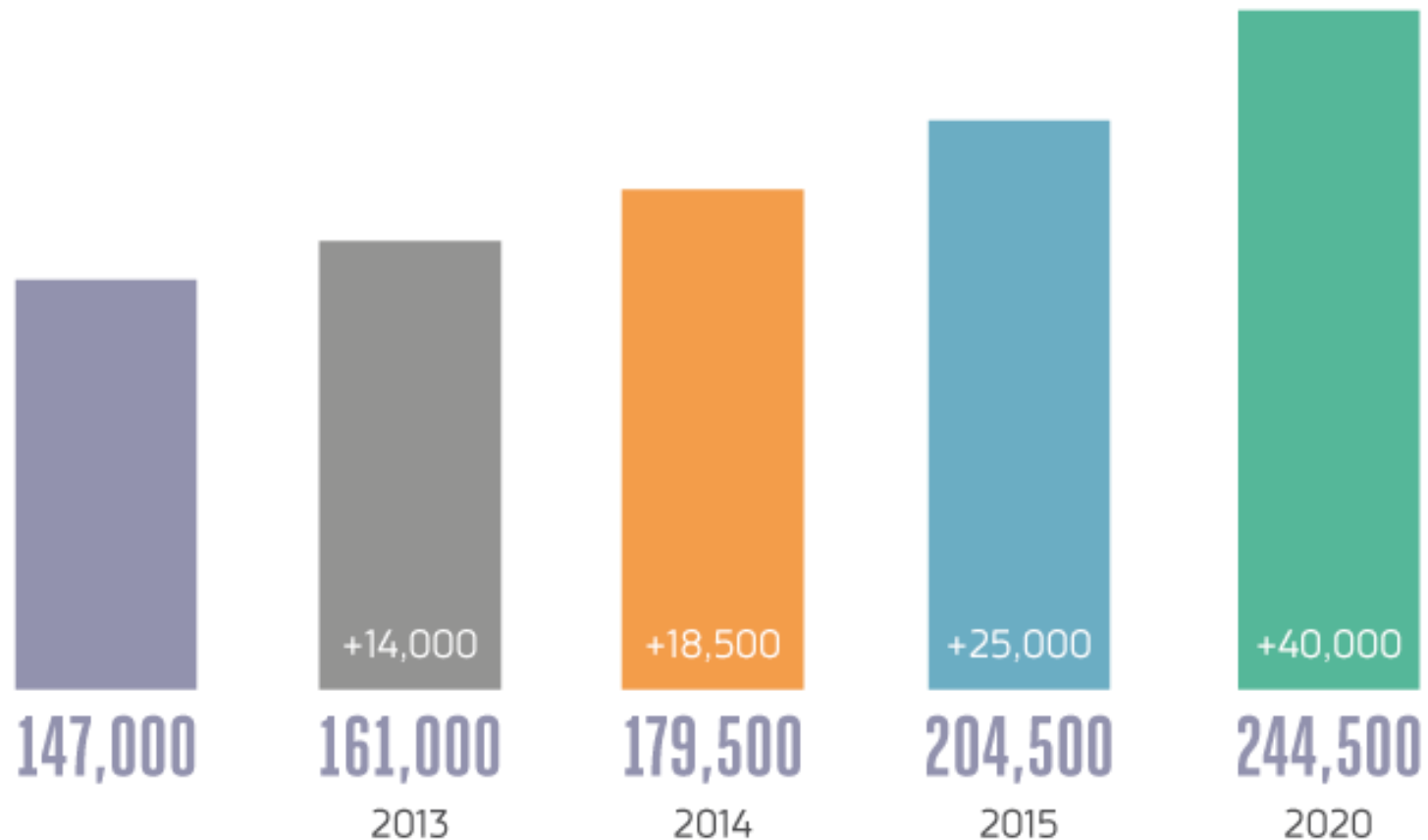




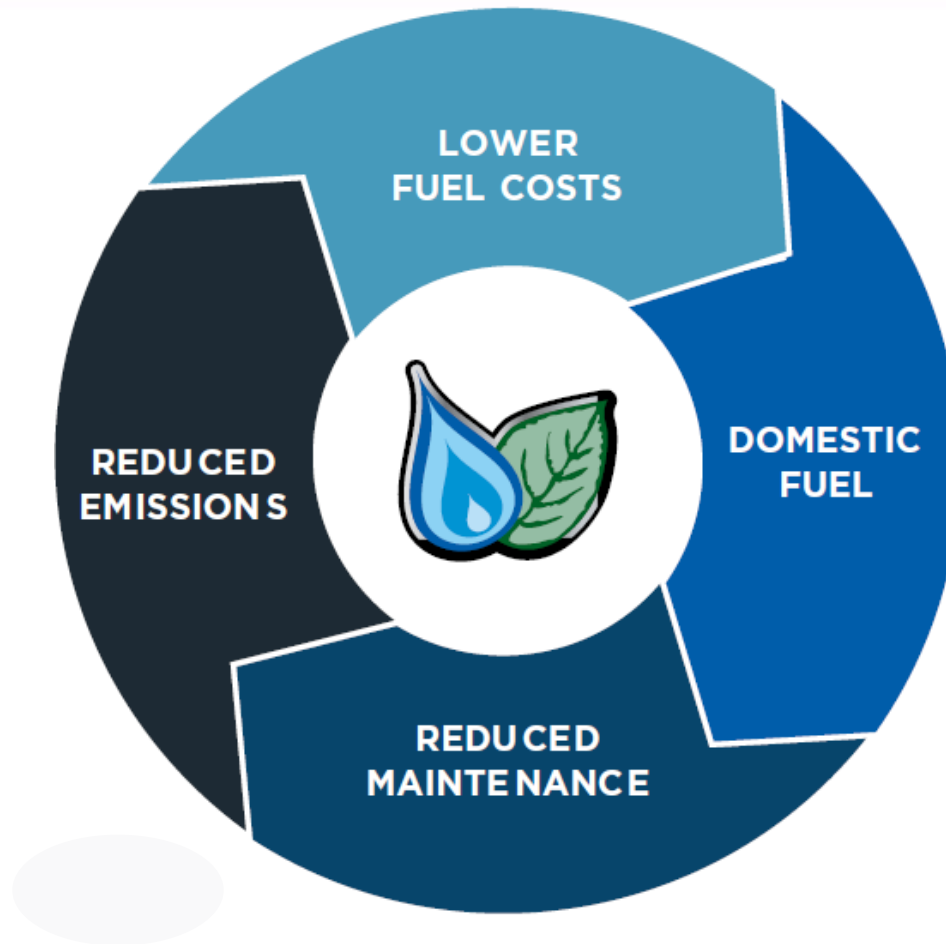


# PROPANE AUTOGAS

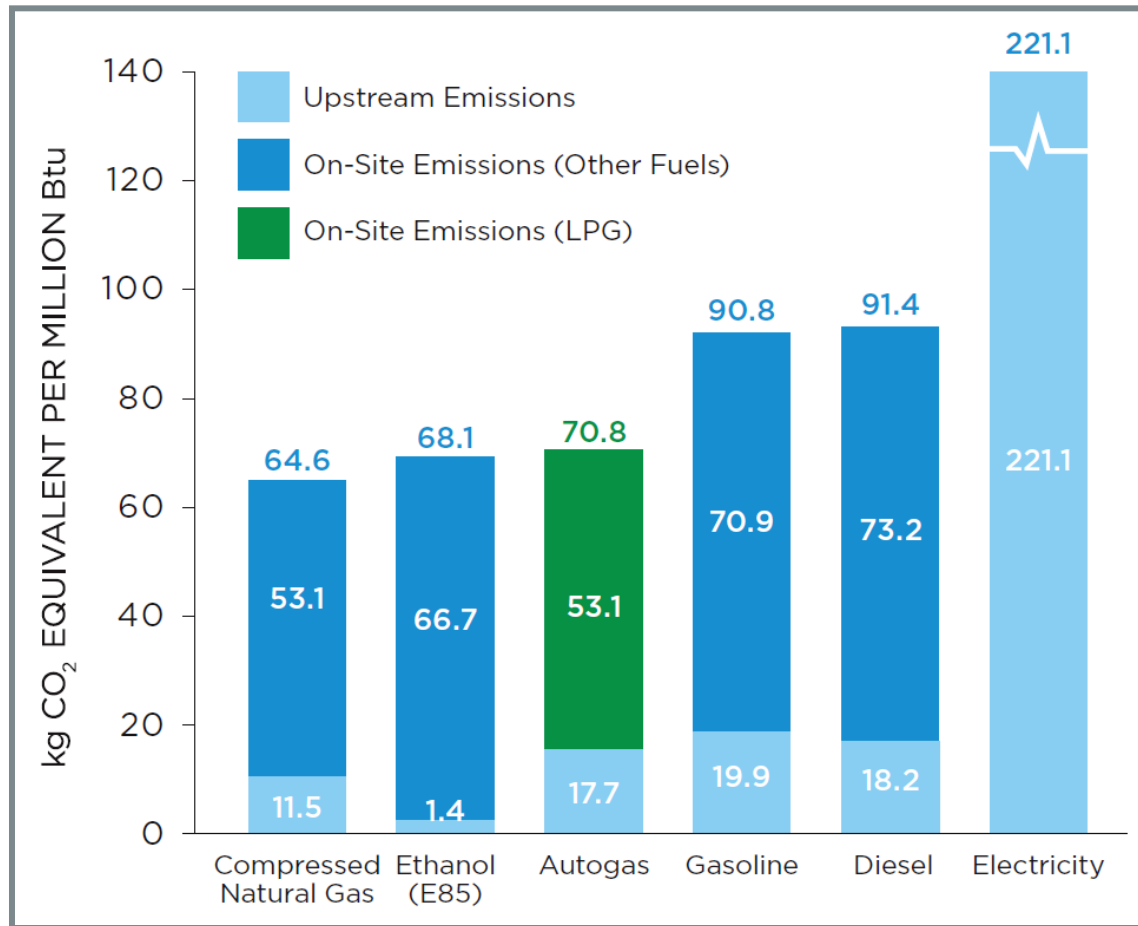
# PROPANE AUTOGAS VEHICLE SALES



# AUTOGAS BENEFITS



# TOTAL CARBON EMISSIONS FOR VARIOUS FUELS\*



Source: \*EPA 2009, *The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model* Version 1.8c 2009. Argonne National Laboratory, Center for Transportation Research. UChicago Argonne, LLC.









# Propane Powers School Buses

The top five states with the highest number of propane autogas school buses includes:

- Texas, 2,178
- California, 754
- Nebraska, 435
- Pennsylvania, 387
- Oregon, 326

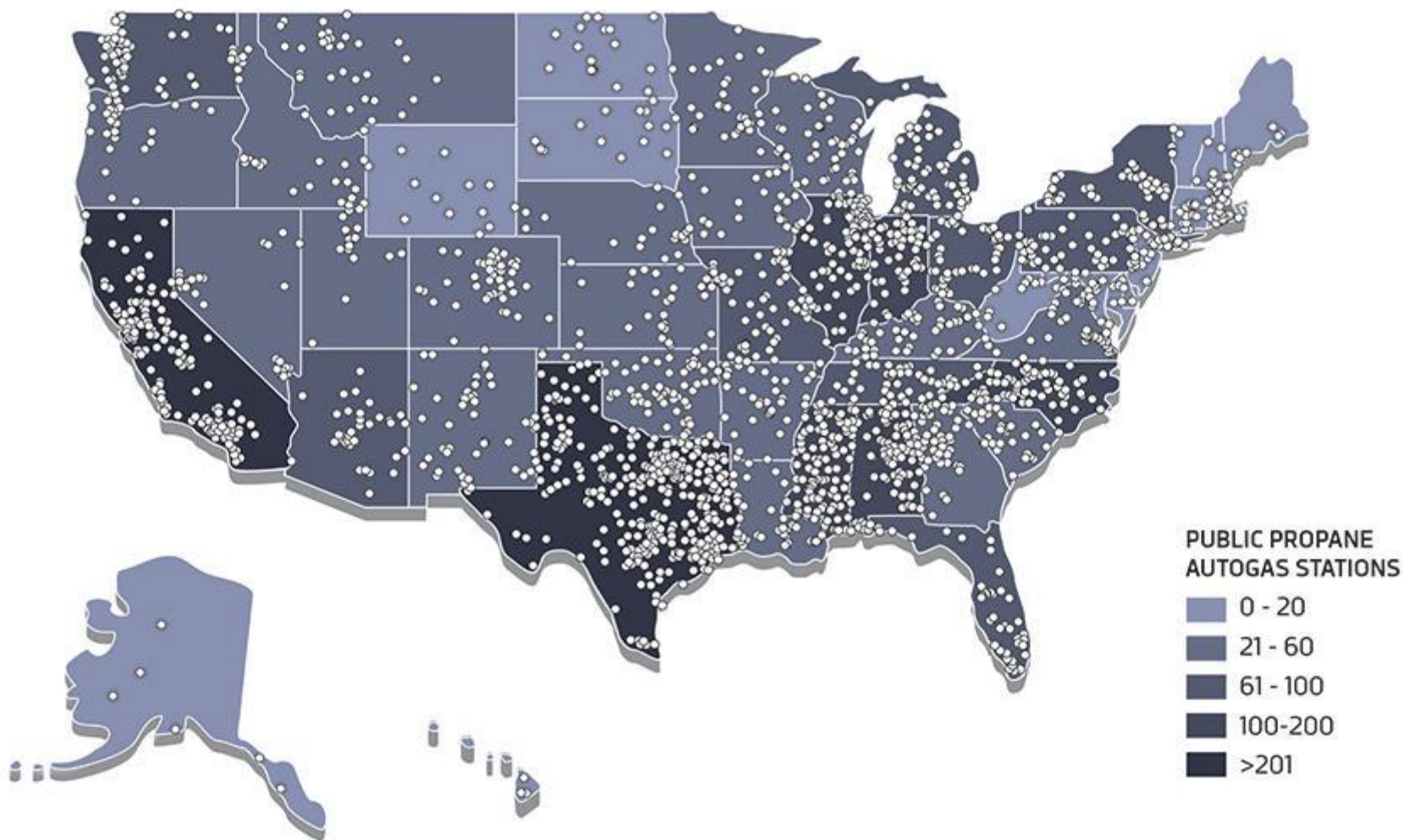
35 states currently use or are planning to use propane autogas school buses.

# Low Emission Fueling Station at NCPGA





# PUBLIC AUTOGAS REFUELING STATIONS



# NC General Statute on motor fuels

**Article 36C of Chapter 105 of the NC General Statutes imposes an excise tax on motor fuels. Motor fuel is defined as gasoline, diesel fuel and blended fuel (G.S. 105-449.60). G.S. 105-449.60(22) defines gasoline:**

- (22) Gasoline. - Any of the following:
- a. All products that are commonly or commercially known or sold as gasoline and are suitable for use as a fuel in a highway vehicle, other than products that have an American Society for Testing Materials octane number of less than 75 as determined by the motor method. The term does not include aviation gasoline.
  - b. A petroleum product component of gasoline, such as naphtha, reformat, or toluene.
  - c. Gasohol.
  - d. Fuel alcohol

# Gas Gallon Equivalent (GGE)

- Propane has a lower energy content than gasoline. When propane is taxed by the liquid gallon, drivers pay 27% more in fuel tax based on energy equivalency.

## Impact

- This creates a disincentive to use a clean green domestically produced affordable product.
- Creating incentive to use propane for vehicular use will help business and create jobs.

# Gas Gallon Equivalent (GGE)

BTU Content:

One gallon of Gasoline = 125,000

One gallon of propane = 91,500



# **How can we create an incentive for consumers to use more Propane as a fuel for motor vehicles?**

- Tax propane based on its energy content and not by volume
- This is similar to the new taxes on compressed natural gas and liquefied natural gas

## Session Law 2014-4, Sections 30(a)-30(c)(SB 786 -- Energy Modernization Act)

SECTION 30.(a) G.S. 105 449.130 is amended by adding a new subdivision to read:

"(1f) Diesel gallon equivalent of liquefied natural gas. – The energy equivalent of 6.06 pounds of liquefied natural gas."

SECTION 30.(b) G.S. 105 449.130 is amended by adding a new subdivision to read:

"(1g) Gas gallon equivalent of compressed natural gas. – The energy equivalent of 5.66 pounds of compressed natural gas."

SECTION 30.(c) G.S. 105 449.136 reads as rewritten:

"§ 105 449.136. Tax on alternative fuel.

(a) Rate. – A tax at the motor fuel rate is imposed on liquid alternative fuel used to operate a highway vehicle by means of a vehicle supply tank that stores fuel only for the purpose of supplying fuel to operate the vehicle. The tax on liquefied natural gas is imposed on each diesel gallon equivalent of liquefied natural gas. A tax at the equivalent of the motor fuel rate is imposed on all other alternative fuel used to operate a highway vehicle. The tax on compressed natural gas is imposed on each gas gallon equivalent of compressed natural gas. The Secretary must determine the equivalent rate. rate for all other non liquid alternative fuels.

(b) Administration. – The exemptions from the tax on motor fuel in G.S. 105 449.88 apply to the tax imposed by this section. The refunds for motor fuel tax allowed by Part 5 of Article 36C of this Chapter apply to the tax imposed by this section, except that the refund allowed by G.S. 105 449.107(b) for certain vehicles that use power takeoffs does not apply to a vehicle whose use of alternative fuel is taxed on the basis of miles driven. The proceeds of the tax imposed by this section must be allocated in accordance with G.S. 105 449.125."

# Gas Gallon Equivalent (GGE) For Propane

- Purchase 1 gallon of propane (measured in volume), total purchased will be 4.2 pounds
- Determine the GGE equivalent of propane by dividing the weight purchased by the GGE equivalent measure
- Formula =  $4.2 \text{ lbs (amount purchased)} / 5.75 \text{ (equivalent measure)} = .73$
- A gallon of propane has 73% of the energy in a gallon of gasoline

# Gas Gallon Equivalency

We recommend that the North Carolina Legislature provide for a method of taxation for Propane for vehicular road use by designating propane as an alternative fuel and taxing it on the energy equivalency of gasoline



# Thank You

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